

(PCT Article 36 and Rule 70)

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/DE2004/002457

## Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages \_\_\_\_\_ as originally filed/furnished
- pages\* 1-14 received by this Authority on 24.11.2005 by fax
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* 1-29 received by this Authority on 24.11.2005 by fax
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the drawings:
- sheets 1/2, 2/2 as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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Box No. II

Priority

1. ☐ This report has been established as if no priority had been claimed due to the failure to furnish within the prescribed time limit the requested:  

☐ copy of the earlier application whose priority has been claimed (Rule 66.7(a)).  
☐ translation of the earlier application whose priority has been claimed (Rule 66.7(b)).
2. ☒ This report has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rule 64.1). Thus for the purposes of this report, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:  
See Supplemental Box.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/DE2004/002457

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	<u>1-29</u>	YES
	Claims	<u></u>	NO
Inventive step (IS)	Claims	<u>1-27</u>	YES
	Claims	<u>28, 29</u>	NO
Industrial applicability (IA)	Claims	<u>1-29</u>	YES
	Claims	<u></u>	NO
2. Citations and explanations (Rule 70.7)			
See Supplemental Box.			

## Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: **Boxes II and V**

1. The following documents are cited in the search report:

**D1:** DE 100 60 751 C1

**D2:** EP-A-0 386 324

**D3:** DE 299 21 970 U1

**D4:** FR-A-2 774 715

**D5:** DE 88 14 650 U1

**D6:** DE 203 17 247 U1

**D7:** DE 296 22 129 U1

**D8:** WO 00/42258 A

**D9:** WO 99/25940 A

**BOX II****Priority (PCT Article 8)**

2. The priority of document **D6** cannot be claimed for **claims 28 and 29**.

2.1 The examination of priority is identical to the examination for determining whether an amendment to an application meets the requirements of PCT Article 19(2) and PCT Article 34(2)(b).

2.2 The subject matter of these claims is not found in **D6**.

2.3 Therefore the priority date of **D6** cannot be claimed for the said subject matter.

3. Consequently **D6** is prior art for **claims 28 and 29** for the purposes of PCT Article 33(2).

## Supplemental Box

**BOX V****Reasoned statement with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement**NOVELTY (PCT ARTICLE 33(2))AND INVENTIVE STEP (PCT ARTICLE 33(3))

4. The subject matter of **claims 1 to 27** is novel (PCT Article 33(2)) and involves an inventive step (PCT Article 33(3)).

4.1 Document **D1**, which is considered to be the closest prior art relating to these claims, discloses (see paragraphs 0001, 0005, 0010, 0029 and 0035) a multilayered decoupling, sealing and drainage system,

- (a) suitable for laying ceramic coverings using the thin-bed method (see paragraph 0033),
- (b) having a layer structure comprising, from the bottom upwards,
- (c) a drainage layer 4 formed by a first mesh-like structural element with drainage areas between mesh structures of the mesh-like structural element, and
- (d) a liquid-permeable nonwoven layer 5.

4.2 The subject matter of **claim 1** differs from the known system in that the following layers are provided above those already specified:

- (e) an anchoring layer (2) formed by a second mesh-like structural element to accommodate a filler material (12) which is applied to the upper surface of the sealing and drainage system (1), and which is

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malleable while it is being worked and subsequently hardens, and

- (f) a reinforcement layer (5), at least some parts of which are fixed to the anchoring layer (2).

The subject matter of the claim is therefore novel (PCT Article 33(2)).

- 4.3 The drawback with the system of **D1** is the fact that "embedding the uppermost nonwoven layer in the tile adhesive does not allow adequate performance of the anchoring or reinforcement function" (page 3, lines 7 to 11). The problem addressed by the present invention is that of how to overcome this drawback.

- 4.4 The solution proposed in **claim 1** involving the layer structure ensures that for each function (such as anchoring and reinforcement, drainage of permeating liquid and decoupling from the substrate) separate layers are provided, the composition and dimensioning of these layers being designed to produce optimal results. The upper anchoring layer and the reinforcement layer which lies above and is fixed to it ensure that the tile adhesive applied to the upper surface bonds fully with the system so as to achieve the required load-bearing capacity.

- 4.5 This solution is not obvious from the prior art, and therefore the subject matter of the claim involves an inventive step.

Document **D2** describes a bonding panel for indoor use, more particularly for dry lining work, which has a

## Supplemental Box

water-impermeable layer (formed by a bituminous sealing layer) and an upper two-ply layer 3a and 3b designed to bond to layers of tiles placed on it. The two-ply layer consists of a nonwoven or woven fabric 3a (see claim 4) covered by a mesh fabric layer 3b. The lower layer 3a appears to serve only to secure the mesh layer 3b to the bituminous layer. Only the upper layer 3b serves to anchor the panel to the tile adhesive. The system according to D2 does not have features (e) and (f) of **claim 1**, and therefore does not lead to the claimed solution.

Document **D3** describes a prefabricated intrinsically stiff panel element for walls, ceilings and floors. The panel element comprises a shaped plastic sheet, which can be used as a drainage course for draining and ventilating tiles laid using the thin-bed method. The sheet is laminated on both sides with at least one layer of reinforcement mesh, and a mortar compound is applied to both sides of the sheet-mesh composite so as to fill out depressions in the sheet and embed the mesh layers. Once the mortar compound has hardened, the panel element is used to line or construct walls and floors. This prior art is different because there is no mention of a sheet-type drainage layer or of a corresponding use of the panel element. With the panel element in its installed condition, the mortar-filled sheet cannot provide drainage. Hence a person skilled in the art would not see a solution in **D3** to the problem of interest and would therefore disregard the teaching of the said document.

4.6 **Claims 2 to 27** are dependent on **claim 1**, and their subject matter is therefore also novel and inventive.



## Supplemental Box

5. The subject matter of **claims 28 and 29** is novel (PCT Article 33(2)) but does not involve an inventive step (PCT Article 33(3)).

5.1 The closest prior art for **claims 28 and 29** is the system described in document **D6**.

5.2 However, the additional features specified in these claims represent routine measures; see, for example, document **D7** (page 5, paragraph 7 to page 6, paragraph 2; insulation 43, page 7, paragraph 3, and figure 4), document **D8** (insulation 32; page 8, line 35 to page 9, line 2, and figure 4) and document **D9** (page 7, lines 4 to 11, and page 11, lines 8 to 13).

To a person skilled in the art, the incorporation of these features in the system described in **D6** would be a standard technical procedure for improving the insulation properties of the system.

5.3 The subject matter of these claims therefore does not involve an inventive step.

INDUSTRIAL APPLICABILITY (PCT ARTICLE 33(4))

6. The subject matter of **claims 1 to 29** is industrially applicable.